



## INDIANA CONSERVATION CHOICES

# Soil Health Practices

Conservation practices that help improve soil health, reduce soil erosion, improve water quality, and provide other natural resource benefits.

## INDIANA NATURAL RESOURCES CONSERVATION SERVICE

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Your SOIL is the most valuable asset on your farm. This life-giving, irreplaceable natural resource is important not just because we can walk on it, build on it, or grow plants in it, but because we depend on the soil for vital functions, such as:

- Physical stability
- Water infiltration and water holding
- Nutrient cycling and scavenging
- Water filtering
- Resiliency to plant stresses
- Biological habitat

These functions are expected from our soil without ever considering that it is extremely dependent on how we manage and care for the land. Experience has shown us that soil functions will diminish over time as the soil resource is degraded. Degradation occurs naturally when the soil is disturbed and/or left bare. But, there is good news. Whether you farm 10,000 acres or a small garden in your backyard, you can restore and improve your soil's health.

"Soil health" is the capacity of a soil to function as a vital, living ecosystem that sustains plants, animals, and humans. It all starts with bringing life back to our soils, or in other words, we need to manage our soil as a habitat for living organisms - those you can see, such as earthworms and predatory beetles to those you cannot see, such as beneficial fungi (mycorrhizae) and bacteria.

The way we manage our soil resource has a greater impact on its ability to function than any other factor. Productive and resilient cropland can be obtained by using a soil health management system that incorporates these four simple principles:

- Minimizing disturbance from tillage and over-grazing
- Maximizing soil cover with residues and living plants
- Maximizing diversity with crop rotations and cover crops
- Maximizing living roots year-round with crops, forages, and cover crops

Are you interested in improving the health of your soil? Whether you are interested in preventing erosion, increasing your soil organic matter, improving your nutrient-use efficiency or increasing your farm's resilience against droughts and floods, farming your land using a soil health management system will help you achieve your goals and interests.

This factsheet lists common conservation practices that improve soil health. To learn more about soil health practices and how to get started, visit your local USDA NRCS office. We can help you make the right choices to protect and improve your land and other natural resources.

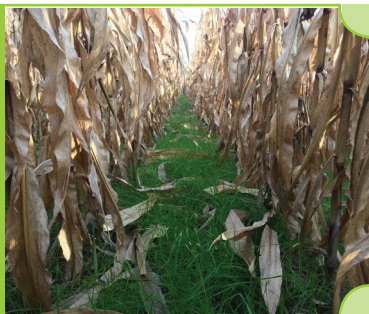




## Description

## Benefits

### Cover Crops



Unharvested grasses, legumes, and/or forbs planted for seasonal vegetative cover as part of the planned crop rotation to provide conservation benefits to the soil.

- » Increases soil health by increasing soil biology.
- » Reduces soil erosion from wind and water.
- » Increases nutrient cycling by capturing and releasing soil nutrients.
- » Improves water quality.
- » Suppresses weeds.
- » Improves soil moisture use efficiency.
- » Decreases soil compaction.
- » Feed soil microbes with diverse living roots.

### No-Till/ Strip-Till



Growing crops without disturbing the soil with tillage. Plant residue remains on the soil surface year around.

- » Protects the soil with residues to reduce wind and water erosion.
- » Improves soil structure and reduces compaction.
- » Maintains and increases soil organic matter.
- » Decreases fuel consumption.
- » Increases plant available moisture.
- » Improves air quality.
- » Provides food and cover for wildlife.

### Crop Rotation



Growing a diverse number of crops in a planned sequence in order to increase and maintain soil organic matter and biodiversity in the soil.

- » Manages crop pests (insects, disease, weeds, etc).
- » Increases soil health and organic matter content.
- » Reduces soil erosion from wind and water.
- » Improves water quality.
- » Improve soil moisture.
- » Provides feed and forage for livestock.
- » Provides food and cover habitat for wildlife.
- » Diversifies what is growing in the soil so soil microbes can thrive.

### Nutrient Management



Managing nutrients by controlling the amount, source, placement and timing to maximize plant growth while minimizing the impact on the environment and the soil.

- » Improves nutrient use efficiency.
- » Increases plant nutrient uptake.
- » Reduces nutrient loss pathways.
- » Values manure as a plant nutrient source
- » Reduces odor emissions.
- » Protects surface and groundwater.

### Pest Management



Managing pests by promoting the growth of healthy plants with strong defenses, while increasing stress on pests and enhancing the habitat for beneficial organisms.

- » Diversifies pest management techniques to maximize benefits while minimizing resistance concerns.
- » Reduces pesticide risk to waterbodies.
- » Decreases pesticide risk to pollinators and beneficial insects.
- » Improves air and water quality by reducing pesticide drift and runoff.

### Buffers



Planting historically unproductive areas along ditches, streams and rivers to perennial vegetation.

- » Increases per acre net profit.
- » Improve water quality in adjacent water bodies.
- » Reduce pesticide drift from adjacent fields.
- » Provides wildlife, pollinator and beneficial insect habitat.
- » Eliminates the application of nutrients and pesticides to environmentally sensitive areas.

For more information visit: [www.in.nrcs.usda.gov](http://www.in.nrcs.usda.gov)

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